

RESOURCE ALLOCATION CATEGORY (SUBPROGRAM) DESCRIPTION

Allocation Code and Title:

- 122, & 126, Bridge Inspection & Repair.

Process Owner:

- Bridge Group, Assistant State Bridge Engineer - Operations.

Program Purpose:

- The purpose of this subprogram is to preserve existing bridges on the state highway system. Bridges are a major transportation asset for ADOT constituting almost 1/3 of all highway assets. Preserving ADOT's bridge assets closely relates to ADOT's mission of "... providing a safe and efficient transportation system ...". Funds from this program also help pay for emergency bridge repairs required because of unexpected events such as vehicle collisions or acts of nature. Finally, this program also funds the bridge inspection effort, which is mandated by the federal government, ensuring compliance with the National Bridge Inspection Standards.
- Most of the program funds are spent on construction costs. However, some are spent on inspection and on design of bridge rehabilitation when emergency repair is needed. Bridge inspection consultants are also paid from this program.
- Maintain state highway bridges so that the condition rating index exceeds 92.5%.

Rationale for Desirable Allocation Level:

- We are requesting to increase the funding of the Bridge Inspection and Repair subprogram from its current annual allocation of \$5,000,000 to \$6,000,000. The new funding level will better equip the Bridge Group to cope with the challenges that are described herein and to sustain the measured goal described above.
- The state bridge inventory is steadily increasing with the expansion and upgrade of the highway system. On average about sixty bridges are added to the bridge inventory each year.
- Frequency and severity of collision damage to bridges are on the rise due to higher volume of truck traffic and movement of over height vehicles.
- Older bridges are undergoing more frequent failure of deck joints, bearings, barriers and decks. Needed repair project demands are far exceeding the current level of available funds, resulting in backlog and delayed bridge repair completion. The resulting added expenditures due to

deteriorated bridge components adversely affect the already limited funding level.

- The scope and extent of the federally mandated bridge inspection tasks have been expanded significantly with the new revised National Bridge Inspection Standards regulations. It is necessary to augment the current funding level to meet these requirements for mandated bridge inspections on state and local highway systems. On-call Consultant inspection contracts would require additional funds to cover expanded scope.

Expected Program Duration:

- This is an ongoing program intended to preserve the Department's bridge assets. Discontinuing this program would lead to the gradual deterioration of bridge components resulting in higher repair/replacement costs and possibly in endangering the travelling public.
- The bridge inspection portion of this program is mandated by Title 23 of the United States Code – Chapter I, Subchapter I, Section 151. Federal highway funds could be withheld if the inspections are not performed according to the National Bridge Inspection Program requirements.

Program Management Process:

Budget Management

- The Assistant State Bridge Engineer for Operations is responsible for recommending subprogram allocation levels, line items and projects.
- Contingencies are used for project budget adjustments and for emergency bridge repairs.
- Bridge repair projects are listed as line items for the current and following years of the 5-year construction plan. Beyond that the program funds are listed as a lump sum.

Authority and Process for Lump Sum Expenditures

- The Assistant State Bridge Engineer for Operations has authority to allocate the lump sum bridge repair project budgets. All allocations are subject to approval by PRB. New project recommendations require approval of PRB, PPAC and the Transportation Board. Contingency funds may be used to add new projects, increase funding for line item projects as required due to inadequate estimates, or for scope revisions. Contingency funds are obligated at bid advertisement for the projects they are associated with.

Project Recommendation Process

- The Bridge Management Section, using the BMS output, works closely with individual construction districts to identify and prioritize project recommendations.
- The Assistant State Bridge Engineer for Operations recommends line item projects to the Bridge Group Program Committee. This committee is chaired by the State Bridge Engineer and consists of both Assistant State Bridge Engineers and Bridge Sections' Leaders.
- Scoping is preparing by the Bridge Management Staff or by Bridge Design On-Call Consultants. Bridge Management or Design staff manage all bridge repair projects. Scoping documents are reviewed by all members of the Bridge Group Program Committee. After final approval by the State Bridge Engineer, they are sent out to all involved ADOT units for review and comments. A project determination form is circulated along with the scoping document for signatures. The Master Project Management Form is initiated for creating the project. Once the scope is finalized, the project is created through adding it to the PRB agenda, then the PPAC.

Project Design Process

- Bridge repair projects are designed by Bridge Design Section staff whenever adequate resources are available. In the event that additional design resources are needed, the design of these projects is entrusted to the Bridge Design On-Call Consultants.
- Associated development costs (right of way, utilities, environmental) are funded through their own programs.